

SURGERY

UNDER THE CHARGE OF

T. TURNER THOMAS, M.D.,

ASSOCIATE PROFESSOR OF APPLIED ANATOMY AND ASSOCIATE IN SURGERY IN THE UNIVERSITY OF PENNSYLVANIA; SURGEON TO THE PHILADELPHIA GENERAL AND NORTHEASTERN HOSPITALS AND ASSISTANT SURGEON TO THE UNIVERSITY HOSPITAL.

Surgical Treatment of Gastric and Duodenal Ulcer.—MAYO (*British Med. Jour.*, July 24, 1920, p. 103). If it is true that the majority of the causes of duodenal and gastric ulcer have an average duration of a number of years, many extending from twenty to thirty years, it is probable that there is an exaggerated idea of their danger to life. Few persons die from perforation, and few from hemorrhage—more, however, than die from surgical procedure. It is true that they suffer, are disabled, and should be relieved; and it is also probable that but a small percentage of the total number of ulcers are recognized or treated for the true condition. Gastric ulcers may give greater discomfort than duodenal ulcers, and, because of the danger of malignant degeneration, should be destroyed at the time of the operation unless this procedure would add unwarranted immediate risk, I believe patients who suffer from gastric ulcer should be told of this danger. In fact, the surgical treatment of ulcer is the best recognition of the value of medical treatment by permanently overcoming delay or obstruction and lowering the acidity with the patient's own alkalis.

Crucial Ligaments of the Knee-joint.—GROVES (*British Jour. of Surg.*, April, 1920) describes his operations for the repair of ruptured crucial ligaments of the knee-joint designed to restore their most important functions—namely, the checking of forward displacement of the tibia by the anterior, and of backward displacement by the posterior, ligament. The leg is encased in sterile stockingette through which a large U-shaped incision is made in front of the knee, its lowest part being just below the tubercle of the tibia, the inner limb running along the line of the inner hamstrings, and the outer one fingerbreadth on the outer side of the patella, the incision in the stockingette being fastened with clips to the skin edges. The tubercle of the tibia is chiselled off, the patella turned upward, and the interior of the joint exposed. In repairing the anterior ligament a strip of the iliotibial band, 8 inches long by $1\frac{1}{2}$ inches wide, is separated, retaining its original attachment to the head of the tibia. The external condyle is drilled, so that the inner end of the hole is far back in order that the new ligament may be as oblique as possible. The front of the tibia is then drilled, so that the inner end of the hole lies just in front of the tibial spine, its external orifice being over the most prominent part of the inner tuberosity of the tibia, the proximal ends of each canal being bevelled to make smooth funnel-shaped openings. With a strip of gauze as pilot the strip of iliotibial band is pulled taut through the femur and through

the head of the tibia, and, with the knee flexed, it is fixed by sutures and one ivory nail on the inner aspect of the internal condyle. After suturing the joint capsule the tubercle of the tibia is replaced and fixed by two bone or ivory nails. A similar procedure is adopted for repair of the posterior ligament with proximal strips from the semitendinosus and gracilis tendons. These are thrust through the inner part of the posterior ligament of the knee and pulled forward until their free ends hang out from the front of the joint, and they are then passed through a hole bored through the internal condyle opening as far forward as possible on the inner aspect of the intercondylar notch. After being pulled tight, with the knee fully extended, the free ends are turned downward and attached to the inner tuberosity of the tibia, and the joint closed. The knee is put up on a back splint, with daily massage and faradism to the quadriceps after three weeks. Six weeks after the operation a light plaster case is applied and patient allowed to walk, and a moulded case with lateral hinges is used later for three to six months.

Rib Grafting Operations for the Repair of Bone Defects and Their End-results.—ELOESSER (*Arch. of Surg.*, 1920, i, 428) says the rib graft is a feasible procedure. The viability of the grafts is great, even in the presence of suppuration. They are more liable to survive in the presence of infection than more massive grafts. They are rapidly absorbed. They hypertrophy slowly. They are prone to refracture (7 out of 22 cases). They are not so good as tibial grafts for the repair of large defects or when the graft is to be put under strain. They are particularly useful when no great demands are made on the strength of the bone, in repairing defects of the skull and in facial plastics. In such cases they should be used by preference. Of a series of 22 cases, 3 were failures, 13 were successes and 6 were partial successes.

The Relation of the Islets of Langerhans to Diabetes, with Special Reference to Cases of Pancreatic Lithiasis.—BARRON (*Surg., Gynec. and Obst.*, 1920, xxxi, 437) says pancreatic lithiasis is a very rare disease, which occurs mostly in males during the fourth decade. The obstruction of the pancreatic duct leads to an advanced atrophy of the pancreas accompanied more or less by fibrosis. The islets may remain intact even when the acini disappear completely. The islets are epithelial structures which are entirely independent of the acini and have no relation to or communication with the ducts. Changes in the islets, such as degeneration, necrosis and fibrosis—generally occur late in the disease, probably as a result of a superimposed secondary infection, consequent to a prolonged stasis in the ducts. In complete accord with the results obtained experimentally in animals, occlusion of the ducts by calculi in man does not result in diabetes mellitus unless there be actual injury to the islets. Cases of pancreatic lithiasis presenting symptoms of hyperglycemia and glycosuria reveal definite lesions of the islets at autopsy. The present study bears out the conclusions that the islets secrete a hormone directly into the lymph or blood streams (internal secretion), which has a controlling power over carbohydrate metabolism. Attempts at regeneration of injured pancreatic tissue

manifest themselves in a definite hyperplasia of the ducts. The principal clinical findings in cases of pancreatic lithiasis are colic-like epigastric pains often associated with temporary glycosuria, steatorrhea, alimentary glycosuria, incomplete digestion of meat fibers as revealed by the persistence of the nuclei in muscle fibers in the feces, and, occasionally, the presence of whitish or grayish pancreatic stones in the feces; the late stages are often accompanied by diabetes mellitus. Operations on the pancreatic duct are often successful. The danger of fat necrosis as a result of the escape of pancreatic fluid appears to be negligible.

Jaundice and its Surgical Significance.—MAYO (*Surg., Gynec. and Obstet.*, 1920, xxx, 545) says that jaundice as a symptom of disease may present a very serious problem in tracing its cause. Fifty per cent. of cases are due to common duct obstruction by a stone and 20 per cent. are due to infective or catarrhal jaundice without duct obstruction. Most of the latter cases occur in children and young persons. From 5 to 8 per cent. of cases of jaundice are due to serious infection of the gall-bladder, possibly gangrene, with or without stones. They are usually accompanied by a degree of pancreatitis. Fifteen per cent. of the cases seen are due to cancer, one-half of these from cancer of the liver, the other half from cancer of the pancreas or the gall-bladder and ducts. A short-circuiting operation relieves the patient often for months. The author has not had a permanent cure from transduodenal extirpation of the tumor of the ampulla. In 8 per cent. of the cases the jaundice was associated with ascites in cirrhosis. In cases of late operation for chronic jaundice the "white bile" which is found at operation and the failure of the power of biliary excretion to appear within a day or two following the operative drainage is a most unfavorable symptom. Long-continued jaundice shows the coagulation time is delayed and this may become serious. The best measure to decrease the coagulation time is the transfusion of acceptable human blood. This can be repeated just before and even after operation if necessary. If the gall-bladder shows marked evidence of disease it is removed. In the more serious infection, with degrees of gangrene, the procedure depends upon the condition of the patient. Another cause of jaundice is injury to the hepatic or common ducts at operation. Jaundice in which the head of the pancreas is enlarged and hard demands most careful consideration. This may be due to pancreatitis or carcinoma. The pancreas is involved secondarily to gall-bladder disease more frequently than was supposed. The gall-bladder may usually be looked upon as the primary focus and should be removed. The cases of obstruction associated with distention of the gall-bladder are best treated by attacking the gall-bladder after it has been emptied to the duodenum. In the cases of damage to the common duct following operation the ends should be sought and anastomosed, or if impossible the upper end is anastomosed to the duodenum or prepyloric region of the stomach. The passing of the bile into the stomach causes no distressing symptoms. In 1916, 1917 or 1918 anastomosis was done in 13 cases, 2 of which died. In 2460 cholecystectomies the mortality was 1.8 per cent. Of 337 cases in which cholecystectomy and choledochotomy were both done the mortality was 3.2 per cent.